Application Number: T2-00007 **Scientific Score**: 60 or below

Specific names of individuals and institutions are blacked out to preserve applicant confidentiality where possible.

Title: CIRM Training Grant

Proposal Abstract as Submitted by Applicant

We propose a Type II comprehensive program to train ten postdoctoral and clinical CIRM Scholars for 3 years in diverse aspects of stem cells ranging from basic genetics and molecular and cell biology to clinical and developing technologic applications. Specific aspects of the program will emphasize: [a] genetics, molecular and cell biology, and integrated systems physiology; [b] practical laboratory work focused on diverse areas of stem cell biology and clinical applications; [c] ongoing literature and research surveys and exposure to emerging concepts and applications through journal clubs, seminar series, and presentations and group discussions of research activities; and [d] ethical and regulatory issues, including intellectual property and marketing topics. CIRM Scholars will participate in a broad, challenging and highly cross-cultural experience that will equip them for careers in bench-to-bedside investigation for development and deployment of future stem cell applications in humans. The objective by the end of the training program is to produce results for publications in prominent journals, but more importantly, to provide a comprehensive, well-rounded training experience that will effectively equip our CIRM Scholars to successfully join and contribute to the research alliances of the future. [redacted] is strategically positioned to provide a uniquely valuable experience to CIRM Scholars. [redacted] offers a range of opportunities in both basic sciences and technologic development that has direct access to virtually all clinical arenas where stem cell applications are being pursued, and secondary access to an extensive network of collaborative possibilities including projects involving large cohorts of subjects. Our proposed training program leverages immense institutional infrastructure, basic, clinical, and technologic expertise, and state-of-the-art patient care and clinical resources in all areas of medicine. Together, these allow us to offer an unparalled, translationally-oriented training experience in stem cell research and clinical applications for CIRM Scholars.

Benefit of this Program to California

This program will benefit the people and the state of California by providing high-quality training in the scientific, clinical, social, and ethical aspects of stem cell research to the scientists and clinicians who will develop and apply future therapies in this rapidly emerging field.

Summary of Review

This proposal seeks to establish a type II comprehensive program to train 5 post-doctoral and 5 clinical CIRM Scholars for 3 years. Trainees will rotate among three core research categories (Neuroscience, Cardiovascular Surgery, and Enabling Technologies) and select a mentor within one of these categories to develop an independent research project. The program proposes to put together a series of courses, but these are not adequately

described. Much of the proposed coursework appears to be a reorganization of existing rotations, classes, and regulatory courses (e.g., HIPAA compliance) with no evidence of a novel integrated program. The director of the CIRM Training Program is an experienced researcher, teacher, and administrator who will be assisted by five program directors, each overseeing a specific research area. However, the faculty does not appear to have significant expertise in stem cell biology and there is no indication of outside collaborations to broaden expertise. Some faculty members have little evidence of mentoring experience and no evidence of having successfully trained research scientists is provided. The applicant pool was not specifically identified and existing training programs were not well described.

Overall Strengths and Weaknesses

The strength of this application is in the clinical excellence of this institution. The considerable weaknesses of this proposal include the poorly described training programs, the lack of basic science expertise in stem cell biology, the lack of current institutional commitment to stem cell biology, and a poorly described base of trainees. This proposal omits details that are necessary for a proper evaluation of the environment for stem cell work

Recommendations

Not recommended for funding at this time.

	Pre	Post	Clinical	Total
Fellows Requested:	0	5	5	10
Fellows Recommended:	0	0	0	0

	Year 1	Total
Budget Requested:	$ 799,975	$ 2,399,925
Budget Recommended:	0	0